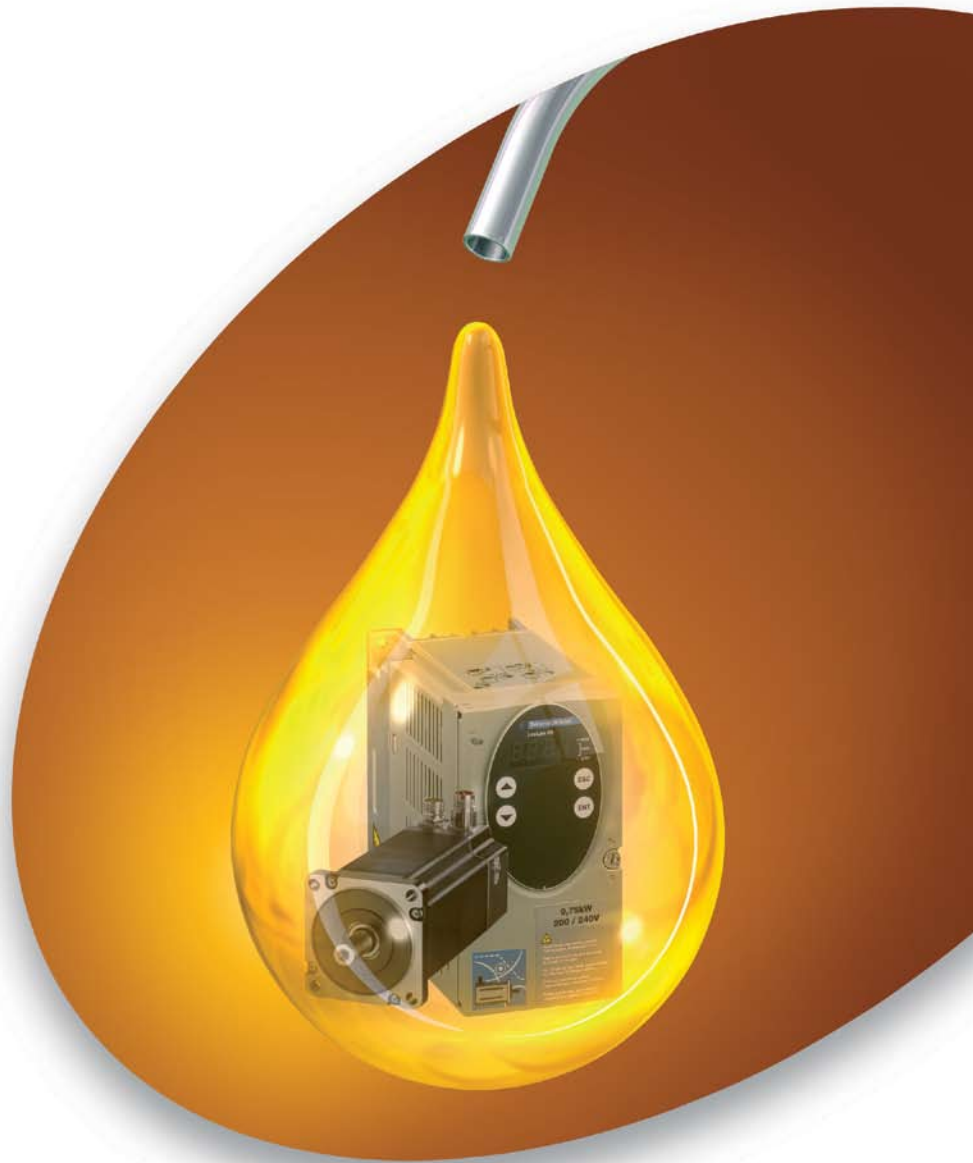


Lexium® 05 Servo Drives

Motion control

The high concentrate
solution for your machines

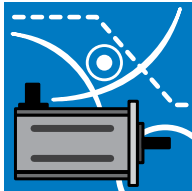


Simply Smart !

Leveraging
ingenuity
and intelligence
for ease of use

Lexium® 05 Servo Drives

Top grade performance



With this new generation of motors and drives, you have the benefit of powerful solutions to design and optimize machines - the perfect answer to your technical and economic challenges. By combining the essential motion control functions with control and command interfaces, Schneider Electric meets your requirements for the **simplest**, most **reliable**... and most **cost-effective** machines.





A new “*additive free*” approach

With the integration of functions and components that are usually external, the Lexium 05 product range opens the way for a new generation of more reliable,

For conformity in total safety...

> Integrated EMC filter

- Level A conducted and radiated
- Conforming to CE marking

> “Power Removal” safety function

- Prevents the machine starting unintended, ensuring operator safety
- Conforms to machinery standard EN 954-1 category 3, and standard IEC/EN 61508-1 SIL2 on electrical installations
- Certified by the TÜV

Speeding up movement...

> “Simply Start” menu

- For quick starting with PowerSuite™ Software

> Automatic identification of the motor parameters

- Simply connect the SinCos® Hiperface® encoder to the drive

> Autotuning

- This automatically defines the optimum control loop gains of the axis



A wide and powerful range

> Lexium 05 servo drives

- Power range from 0.4 to 6 kW
- Voltage range from 115 V to 480 V

> BSH™ servo motors

- Nominal torque of 0.42 to 33.5 Nm.
- Nominal speed of 1500 to 8000 RPM
- Compact, due to its new winding technology based on salient poles

> A dynamic combination

- Low inertia of the BSH motors
- Fast control loop response time
(Current loop sampling time of 62.5 µs)

Lexium® 05 Servo Drives

Ideally adapted for motion control

You can increase the capabilities of your machines and improve their overall performance.

Accurate control...

> 4 modes

Select the control mode of your Lexium 05 drive to suit your application.

- ☐ Point-to-point positioning:
- ☐ Relative or absolute movement
- ☐ Target position and parameters transmitted via the communication network
- ☐ Torque or speed regulation
- ☐ Electronic shaft
- ☐ Manual mode

Unrestricted communication...

> CANopen

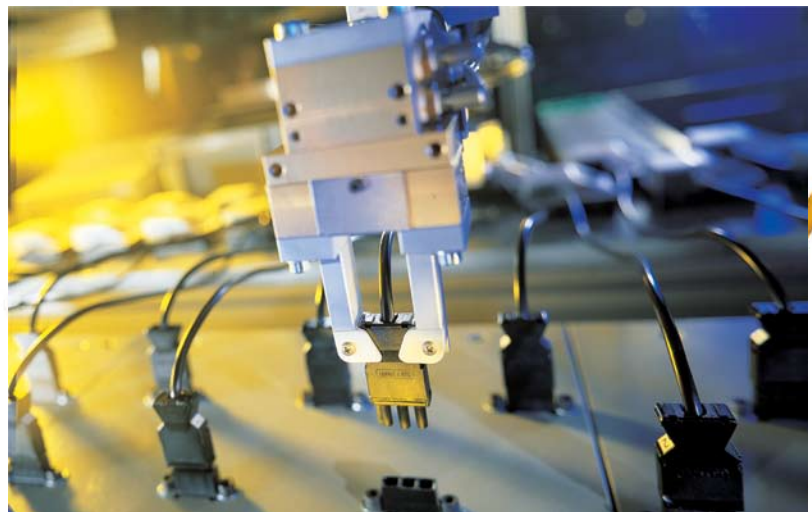
- ☐ Lexium 05 drives incorporate the CANopen fieldbus as a standard. High-speed data exchange and direct connection to industrial control systems are also available with these drives.

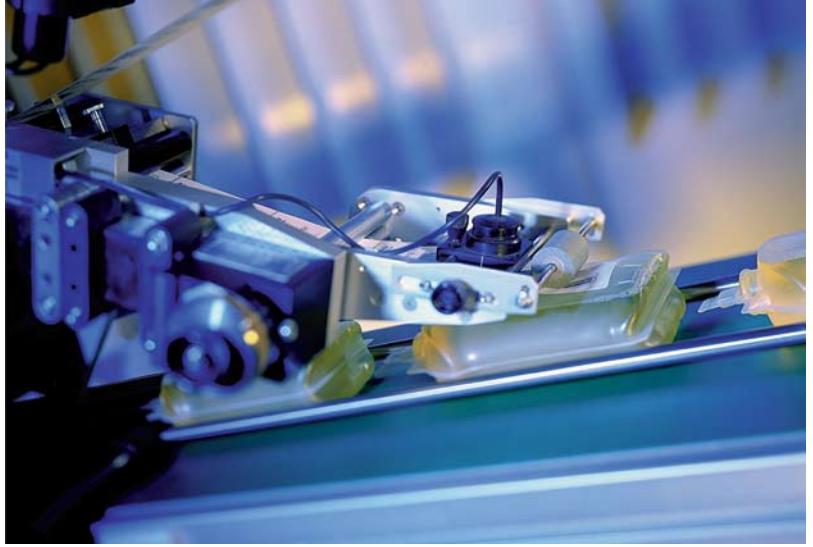
Conforming to CANopen standard DSP 402, Lexium 05 drives incorporate the position, torque and speed profiles, and new references are taken into account in 1-ms !

> Profibus DP

- ☐ A version of Lexium 05 drives integrate Profibus DP, adding to the possible connections to communication networks.

The CANopen and Profibus DP versions also have a Modbus® serial link.





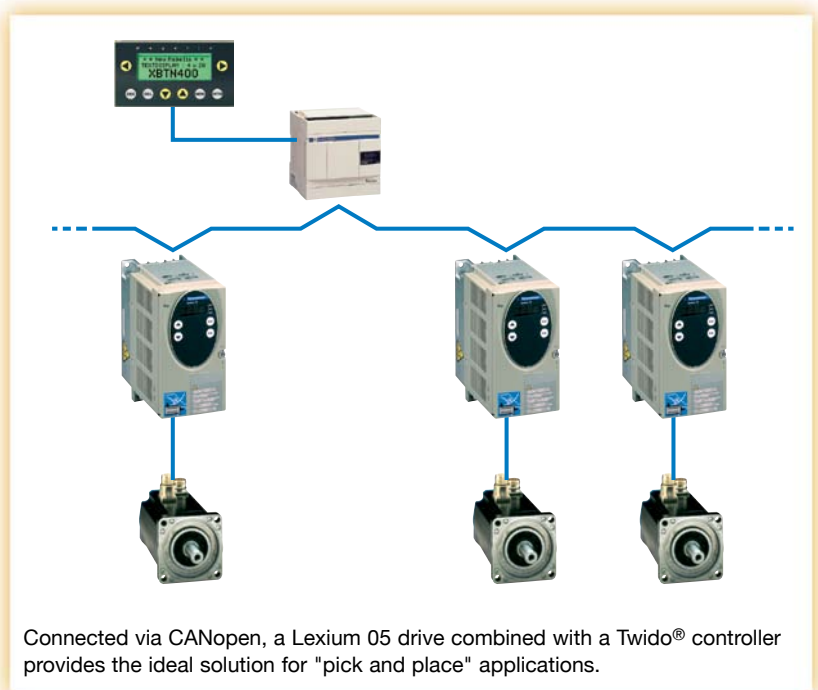
Combine various possibilities...

> Two +/- 10 V analog inputs

- Lexium 05 drives can also be connected to all controllers with analog outputs: the precision of its two +/- 10 V analog inputs with 14-bit resolution, combined with very fast control loop reaction times, gives very high performance levels and a high degree of adaptability.

> An RS 422 incremental encoder interface

- Use as an encoder emulation output:
- Position feedback to a controller
- Position reference to a slave drive
- Use as a position reference input in electronic shaft mode
- This interface can also be configured as a pulse/direction input



Lexium® 05 Servo Drives

The ultimate in simplicity...

The sole aim of the advanced design of the Lexium® 05 drive product range is to make it easier to integrate and simplify startup and operation of the machine.

Ensuring the best quality drives...

> Algorithms with amazing results

With autotuning users can achieve their required motion performance levels quickly and easily. It provides an optimum answer to machine performance and efficiency, even for vertical movement.

> An oscilloscope function

Available with the PowerSuite software workshop, this enables users to display the electrical and mechanical values of the movement.

Staying in contact and in control...

For programming, display and diagnostics, the Lexium 05 drive has:

> An integrated 7-segment display terminal

> A remote terminal for mounting on an enclosure door

> The user-friendly PowerSuite™ software workshop

PowerSuite software provides access to all the parameters of the application and full, instant diagnostics of the status of the axis, using a PC connected via Modbus or a Bluetooth wireless link.

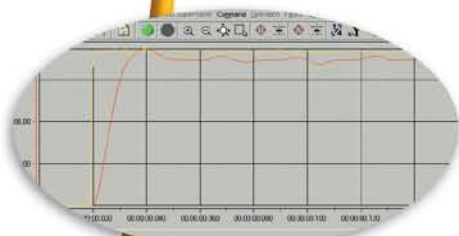
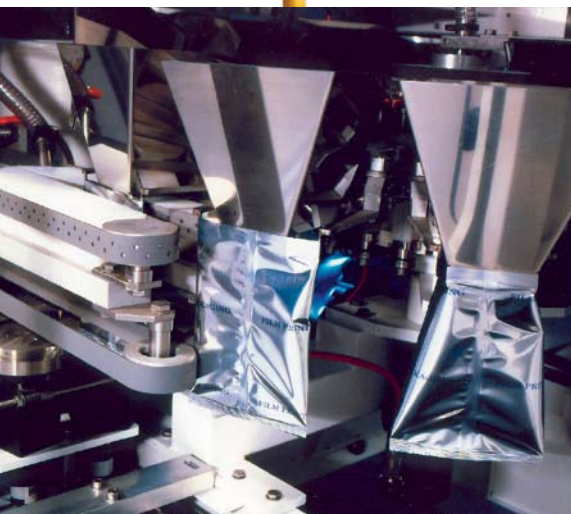
And integrating with no restrictions

> It comprises the following in a compact unit:

- ☐ EMC filter
- ☐ The braking resistor, which does away with the need to use an external resistor in most applications
- ☐ The "Power Removal" safety function, which prevents electromechanical redundancy
- ☐ Operation up to 50°C without derating

> Simplified installation

- ☐ Side by side mounting
- ☐ DIN rail mounting
- ☐ Use of spring terminals



Selection guide

BSH servo motors

Lexium 05 servo drives



BSH motors can be equipped with:

- b** Holding brake
- b** Multiturn SinCos encoder
- b** 90° adjustable connectors
- b** An IP65 shaft end
- b** A gearbox

(Please consult the Lexium 05 catalog for further information).

RPM = nominal speed
Mo = torque at standstill

		110/120 V single phase, with integrated EMC filter				200/240 V single phase, with integrated EMC filter			
		LXM 05				D10F1			
		D10F1				D10M2			
Mo (Nm)	RPM	0.4 kW	0.65 kW	1.4 kW	RPM	0.75 kW	1.2 kW	2.5 kW	
BSH 0551T	0.5	3000	1.4 Nm		6000	1.4 Nm			
BSH 0552M	0.9				1500	2.3 Nm			
BSH 0552P	0.9				4000	2.7 Nm			
BSH 0552T	0.9	3000	1.77 Nm	2.7 Nm	6000	1.77 Nm			
BSH 0553M	1.3				1500	4.2 Nm			
BSH 0553P	1.3				4000	3.18 Nm			
BSH 0553T	1.3	3000		3.31 Nm	6000		3.31 Nm		
BSH 0701P	1.4				3000	3.2 Nm			
BSH 0701T	1.4	2500	2.42 Nm		4000		3.39 Nm		
BSH 0702M	2.1				1500	6.8 Nm			
BSH 0702P	2.2				3000	5.37 Nm	7.55 Nm		
BSH 0702T	2.12	2500		4.14 Nm	6000		4.14 Nm	6.8 Nm	
BSH 0703M	2.8				1500	10 Nm			
BSH 0703P	3.1				3000		7.28 Nm	10.3 Nm	
BSH 0703T	2.8	2500		7.36 Nm	6000			7.38 Nm	
BSH 1001T	3.4	2500		8.5 Nm	4000			8.5 Nm	
BSH 1002P	5.8				2000			18.3 Nm	
BSH 1003P	7.8				2000			22.79 Nm	

		200/240 V three phase, without integrated EMC filter				380/480 V three phase, with integrated EMC filter			
		LXM 05				LXM 05			
		D10M3X				D14N4			
Mo (Nm)	RPM	0.75 kW	1.4 kW	3.2 kW	RPM	1.4 kW	2 kW	3 kW	6 kW
BSH 0551T	0.5	6000	1.4 Nm						
BSH 0552M	0.9	1500	2.3 Nm						
BSH 0552P	0.9	4000	2.7 Nm		6000	2.7 Nm			
BSH 0552T	0.9	6000	1.77 Nm						
BSH 0553M	1.3	1500	4.2 Nm						
BSH 0553P	1.3	4000	3.18 Nm		6000	3.87 Nm			
BSH 0553T	1.3	6000		3.31 Nm					
BSH 0701M	1.4	1500	3.2 Nm						
BSH 0701P	1.4	3000	3.2 Nm						
BSH 0701T	1.4	6000	2.41 Nm	3.19 Nm					
BSH 0702M	2.1	1500	6.8 Nm						
BSH 0702P	2.2	3000	5.37 Nm	7.55 Nm	6000	7.55 Nm			
BSH 0702T	2.12	4500		6.8 Nm					
BSH 0703M	2.8	1500	10 Nm		3000	10.3 Nm			
BSH 0703P	3.1	3000		7.28 Nm	6000		8.92 Nm		
BSH 0703T	2.8	6000		10.25 Nm					
BSH 1001M	3.4				2000	8.5 Nm			
BSH 1001P	3.3	2000		9.45 Nm	4000		9.45 Nm		
BSH 1001T	3.4	4000		8.5 Nm					
BSH 1002M	5.5				2000	16 Nm			
BSH 1002P	5.8	2000		12.35 Nm	4000		15.43 Nm		
BSH 1002T	5.52	4000		16 Nm					
BSH 1003M	7.8				2000		27.8 Nm		
BSH 1003P	8	2000		28.3 Nm	4000			26.97 Nm	
BSH 1004P	10	1500		30.41 Nm	3000			22.53 Nm	30.41 Nm
BSH 1401P	11.1				2500			26.2 Nm	
BSH 1401T	11.1	2500		24.77 Nm					
BSH 1402M	19.5				1250			57.1 Nm	
BSH 1402P	19.5	1500		46.72 Nm	3000				57.42 Nm
BSH 1402T	14.73	2000		25.04 Nm					
BSH 1403M	27.8				1500			76.66 Nm	88.17 Nm
BSH 1403P	27.8				3000				57.24 Nm
BSH 1404M	33.4				1500				126.45 Nm
BSH 1404P	33.4				3000				60.04 Nm
BSH 2051M	36				1500				68.3 Nm

● replaced by A for the CANopen/analog inputs version, replaced by B for the Profibus DP version.

1.4 Nm This value corresponds to the peak torque at standstill that can be provided by the Lexium 05 servo drive/BSH servo motor combination.

The efficiency of **Telemecanique®** branded *solutions*

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